

HISTORICAL NOTES ON SOME  
old Galenicals and Chymicals now in use.  
by JOHN EAGLE Chemist.



Middle Road. Roxeth.  
1888.



HISTORICAL NOTES  
on some of the  
OLD GALENICALS & CHYMICALS  
now in use,  
or  
a glance at pharmacy in olden time.

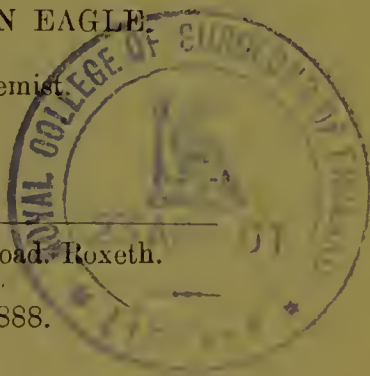
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## To the reader.

I have ventured to publish these few notes with the hope that, although wanting the recommendations of manner and method of treatment, the data presented will render them not only interesting but also of some practical utility ; especially at the present juncture when the old experiment of introducing popular names into an official pharmacopœia is again being undertaken.

In my humble opinion this project is not likely to be attended with more success now, than appears to have been the case on former occasions.



## PHARMACY IN OLDEN TIME.

Until the early part of the sixteenth century the medical profession was open to all comers, and any man who could afford to adorn his head with a red hat, the customary sign of a practitioner in physie, was at liberty to proclaim himself Doctor and practise as such without any interference whatever. This was its condition in 1511 when the legislature took the first step towards remedying the evils of such free trading by passing an act prohibiting anyone from practising as physician or surgeon within the city of London or seven miles thereof unless previously examined and licensed. Seven years later the profession acquired a local habitation and a name by the establishment of the College of Physicians, an event brought about mainly through the exertions of Henry the Eighth's Physician, Dr. Thomas Linacre, whose

house in Doetors Commons was dedicated to the assemblies and purposes of the College.

Medical knowledge, however, had not advanced much beyond the limits it attained in the time of Galen, whose writings, with those of Hippocrates, remained the chief if not the only authorities by which medical men regulated their daily practice. The few medieal books then existing were either written or printed in the latin language, at that period the common medium of intercommunication between the educated classes of all European countries. Preseripions were full of latin ; and full of ingredients too, for it was seldom that a mixture contained only three or four components, recipes with ten or more different drugs being quite common. The early pharmaceopœias likewise vied with each other in publishing lengthy formulæ with ingredients whose chief merit appears to have been that they claimed no particular habitat or country, but could always be easily procured wherever man or almost any other animal was to be found.

The introduction of chymical remedies, however, and more particularly antimonial compounds by Basil Valentine in the fifteenth century brought about a radical change in medieal practice and devided the

ranks of the profession into two great parties or schools one continuing to recognise the authority of the ancient writers ; the other, including among its members the younger and more enterprising practitioners, boldly attacking the whole Galenical system, and, with a zeal well worthy of the cause, readily accepting and putting to practical tests the interminable throng of elixirs, quintessences, salts and tinctures, which the unwearied activity of the alchymists was continually bringing under their notice.

The closing years of the fifteenth century witnessed antimony occupying the position of a leading remedy in the daily practice of many physicians both in this country and on the continent, and it continued to keep its place in the estimation of the more cautious prescribers for a long period afterwards. Nevertheless in the course of time the accumulation of unfortunate experiences by the more numerous body of practitioners gradually created a strong reaction against it, which in France prevailed to such a degree that it culminated in the year 1566 with the Parlement of Paris forbidding the use of antimonial compounds for medical purposes, and one unlucky physician having ventured to disregard this ordonnance was summarily

expelled the faculty. But, although antimonials had hitherto attracted the largest amount of attention from practitioners in every rank of the profession, yet other not less important remedies were steadily making their way in the favour of many prescribers, Red precipitate. *Mercurius dulcis precipitatus*, (Calomel), and White precipitate, being among the more important of those that have survived to the present day.

This same epoch also saw the introduction into general practice of another potent remedial agent whose powers soon placed it in a foremost position in the arsenal of prescribers. That drug was Opium, the properties and uses of which were systematically studied for the first time by Felix Platerus, a physician of Basle, and after him by Sylvius de la Boe, of Leyden, whose united labours led to its adoption among the leading practitioners of the day.

Nevertheless, long after the introduction of chymical remedies the materia medica continued to include a considerable number of nauseous substances of animal origin that rendered a well stocked apothecary's shop of the sixteenth or seventeenth century a veritable museum of unsavoury curiosities, drawn almost as largely from the animal as from the vegetable king-

dom. In addition to these it also comprised a numerous collection of earths, stones, minerals and fossils, so that the number of simples formerly used was much greater than it is now, and when chymical compounds came into general demand the materia medica became so overwhelmed by the redundancy of remedies that the weaker and less reliable were neglected and dropped out of use, whilst the more powerful preparations from the laboratories of the alchemists took their place in the daily practice of the profession.

Out of the vast throng of these latter productions introduced during the fifteenth and sixteenth centuries only a few of the more definately constituted have survived to the present day, and foremost among these Oil of Vitriol claims notice first; for its importance was fully recognised in the earliest days of Chymical science, and few of the early printed books on that subject omit careful directions for its preparation.

Until the year 1697, when the mode of preparing it from sulphur was first made known, its principal source was the sulphates of iron and copper, which from ancient times had been in use as stiptics. These were described by various writers as Roman, English, Hungarian and Cyprian vitriols, but there appears to

have existed some confusion as regards their identity, the Roman vitriol of one writer answering to the description of English used by another, and a third stating that they were the same and both made from iron, good authorities, however, support the view that the English was a sulphate of iron and the Roman a sulphate of copper. The description of the process occupies about five or six pages of the "Booke of Distillation" London, 1565. yet may be summed up in very few words: twelve pounds of Roman vitriol were calcined to six pounds, and the residue put into a glass retort to which was adapted a receiver containing eighteen ounces of water. A strong heat being applied for a couple or more days until fumes ceased to pass, the contents of the receiver were then removed and the eighteen ounces of water separated by redistillation. The red colour of the oil produced by this method rendered a third distillation necessary before it was fit for the many purposes of physicians who prescribed it in combination with various diluents, syrups and aromatics, in loss of appetite, colic, agnes, and dysentery. One of the most celebrated of such combinations was that devised by Mynsieht, a German in the seventeenth century, and named by him Elixir





De Distillation of ye Oyl of Vitriol.

of Vitriol. The formula is a fair specimen of those crowding many Dispensatories of that period, and, like some others, was not very satisfactory, inasmuch as the quantities of oil of vitriol and rectified spirit employed were given in terms which, as will be seen, were vague and uncertain.

#### ORIGINAL FORMULA.

Galanga the less,	...	...	1½ oz.
Calamus Aromaticus,	'	...	1 oz.
Mint,			
Red sage, of each	...	...	½ oz.
Choiice cinnamon,			
Cloves,			
Ginger, of each	...	...	3 draehms.
Nutmegs,			
Cubebs, of each	...	...	2 draehms.
Xyloaloes,			
Citron peel, of each	...		1 draehm.

mix and make a powder : add 3 ounces of white sugar candy and sufficient rectified spirit to make it thick like honey. Put all into a glass, and add thereto sufficient oil of vitriol to overtop it to the breadth of four fingers and digest forty days, then filter and upon the remaining fæces put S. V. and according to the Spa-

gyrick Art, extract an essence : mix both these together, circulate in B. M. for twenty days, and keep for use.

This appeared in the London Pharmacopœia for the first time in 1724, where these quantities of dry ingredients were directed to be digested for twenty days in a mixture of a pint and a half of spirit of wine and a pint of oil of vitriol, and in the succeeding edition of 1745, the last occasion of its appearance in a London pharmacopœia, the process was further simplified ; becoming only a mixture of four ounces of oil of vitriol with a pint of Aromatic tincture, made by macerating six drachms of cinnamon, three of the lesser cardamom and two each of ginger and long pepper, in a quart of proof spirit.

The next official British dispensatory I find the name in is the Edinburgh pharmacopœia, 1792, and there the number of components is reduced to four ; vitriolic acid, rectified spirit, cinnamon and ginger, the whole formula resembling that for *acidum sulphuricum aromaticum*, in the first edition of the British Pharmacopœia, 1864, whilst, in the latest issue of this latter work matters are rendered still more easy for the operator, and we may now regard the aromatic sulphuric acid as the latest and most improved substi-

tute for Mynsicht's famous and more eomplex elixir.

It is well, however, to mention that simple mixtures of sulphuric acid and water or rectified spirit, have also been called elixir of vitriol, but it is certain that Mynsicht's form was the only one which attained any eelebrity.

Another popular yet still more ancient remedy is Hierā Piera or Sacred Bitter, also known as Hierā dialoës and Hierā Piera Simplex, one of the most ancient medicines now in use. The best known formula is that given by Galen, de compos. medicam. secundum locos. lib 8. cap 2. as under:—

ORIGINAL FORMULA.

einnamon, indian spikenard, mastie, saffron, xylobalsamum, and asarum, of each six drachms, aloes one hundred drachms.

These constituted the Species pro Hierā Piera, and when required for use were made into a paste with thrice their weight of despumated honey.

This compound was introduced into many of the old dispensatories and among these the Augustan, which allowed the apothecary to substitute either aloes wood or cubebs for the ylobalsamum, the earlier London pharmacopœias likewise permitted aloes

wood to be employed for the same purpose, and in the edition of 1745 *Hiera Piera* consisted of only two ingredients viz. powdered canella bark three ounces, powdered extract of socotrine aloes one pound ( 12 oz).

From the same source we obtain the original recipe for an equally ancient and not less popular medicine; *Pil Cocciæ*,

ORIGINAL FORMULA. (Galen)

*Colocynth* pulp one part, socotrine aloes and scammony, of each two parts, juice of wormwood one part.

In the ninth century Rhazes a celebrated Arabian physician enlarged this formula by adding a number of other ingredients and these then became known as *Pilulæ Cocciæ majores*, whilst Galen's original recipe, with slight modifications, entered various dispensatories under the name of *Pilulæ Cocciæ minores*, and in that of London, 1745, with the title *Pilulæ Colocynthidis cum aloë*, where it was directed to be prepared with syrup of buckthorn instead of wormwood juice, and the addition of a quarter of a part of oil of cloves.

Next deserving notice is another well known aloetic purgative with a reputation dating back eighteen centuries, for its invention was ascribed to Rufus

of Ephesus in the reign of Trajan, and the name it bears is *Pilulæ Rufi*, the ingredients were socotrine aloes two ounces, myrrh and saffron each one ounce, the excipient ordered in the early London pharmacopœias being, at first, syrup of lemons, afterwards syrup of wormwood and subsequently syrup of saffron.

Made with the same proportions of dry ingredients as were prescribed in the above work two centuries ago, but mixed with different kinds of excipients, this long tried remedy yet finds a worthy place in the British Pharmacopœia under the name of *Pilula Aloes et Myrrhæ*, whilst the *Pil Ucciaë Minores* is fairly represented by the *Pil Colocynth Co*.

Among the names of ointments that have survived in popular use to the present day there is probably not another so ancient as *Basilicon*. The name itself signifies Kingly or Royal and is of Greek origin, and in the time of Celsus designated certain plasters containing black pitch. The best known recipes, however, with which this name is identified are those ascribed to Mesue in the ninth century, and named *Basilicum Minus*, or, from its being composed of four things *Tetrapharmacum*, and *Basilicum Majus*, both ointments, but, like the plasters noticed by Celsus,

each containing black pitch. The *Basilicum Minus* was made by melting together six ounces each of yellow wax, black pitch, and resin, then adding nine ounces of oil. The *Basilicum Majus* in addition to these contained a number of other ingredients, but, according to Dr. Quincy it was never used, and therefore is scarcely worth more attention.

In the London Pharmacopœia of 1724 a new variety received official sanction with the name of *Unguentum Basilicon Flavum*, and a composition of three pounds each of yellow wax and pine resin, twelve ounces of Strasburgh turpentine, three pounds six ounces of linseed oil, and three pounds of Burgundy pitch added to the others when melted.

The next edition of 1746 contained no less than three different sorts ; the original *Tetrapharmakon* as described above ; an improved yellow basilicon, the ingredients of which were olive oil, common turpentine, yellow resin, yellow wax and Burgundy pitch ; and a new kind called *Green Basilicon*, formed by mixing one ounce of prepared *verdegris* and three ounces of olive oil with eight ounces of the yellow.

In 1783 all these were left out of the new pharmacopœia, but, in 1809 the *Tetrapharmakon* again occu-

pied an official position with the new name Unguentum Picis Aridæ, which, in the second issue of that edition, was again changed to Unguentum Resinæ Nigræ, and in 1824, 1836, to Unguentum Picis Nigræ. In 1851 it appeared in the last of the London Pharmacopœias as Unguentum Picis, but it has not been received into either of the British.

From the basilicons we turn to the equally ancient Diachylon, a name that, as early as eighteen centuries ago, represented a plaster originally invented by Menecrates a Roman physician in the time of Tiberius.

The formulæ usually adopted by the London College were those also devised by Mesue, and in their earlier dispensatories there were described as many as four or five different kinds of Diachylon, although, litharge boiled with oil formed the basis of the majority and each of them were compounded with the juices of herbs, whence the name signifying in Greek a composition of juices. In the Diachylon Magnum one of the ingredients used was oesypum the grease extracted from sheeps wool, described by Dioscorides in the eighty fourth chapter of his second book, and quite recently reintroduced under the name of lanolin.

Of the few plasters now in use among us the near-



est substitute for the Simple Diachylum of the old dispensatories is the Emplastrum Plumbi of the British Pharmacopœia.

Even more ancient than the basilicons and diachylons is the Acetum Scillæ, which is said to have been invented by Pythagoras thirteen centuries before Mesue existed, consequently, it would be second in age only to Vinum Ferri and take precedence over the Oxymel Scillæ by at least six hundred years. The earliest recipe for the latter that I am acquainted with occurs in Pliny's Natural History where several other ingredients are prescribed in addition to the honey, vinegar and squills. The kind of oxymel we now use was described by Marcellus, a contemporary of Galen, in the first book of *De Medicamentis Empiricis*, and both these preparations have been described in most dispensatories along with a Vinum Scillæ, which, however, has not appeared in any London pharmacopœia since 1720. In the succeeding edition of 1746 Syrup of Squills was introduced for the first and only time, and did not again meet with official recognition until 1864 when it was the only fluid preparation of squills in the British Pharmacopœia, but, in later editions all three, Oxymel, Vinum and

the Syrupus have been duly particularised, although the Oxy-mel has been to a great extent supplanted by the later invention.

The next note relates to Elixir Paregorieum a remedy with a reputation of not much less than 150 years duration, the name having appeared in the London Pharmacopœia for the first time in 1745 where it was directed to be prepared after this manner :—

PAREGORIC ELIXIR.

original formula.

Flowers of benjamin,  
Opium strained, of each a draehm,  
Camphor two scruples,  
Essential oil of aniseeds half a draehm,  
Reetified spirit a quart, ( 32 ouncees ),  
After digestion strain off the spirit.

In the next edition, 1788. the name was changed to Tinctura Opii Camphorata. with proof spirit ordered instead of reetified, and the quantity of oil increased. In 1809, the oil was omitted and the name altered to Tinctura Camphoræ Composita. In 1836 the oil was restored and since then the only changes

have been a slight increase in strength and a minor, but only temporary, alteration in name.

With regard to the original name Paregoric Elixir I have not met with any notice of it prior to the date of its appearance in the Pharmacopœia of 1745, although the formula itself looks very like a modification of another invented by Le Mort many years previously and named Elixir Asthmaticum, which, for the sake of comparison, is worthy of reproduction:—

#### ASTHMATIC ELIXIR.

Flowers of benjamin,  
Opium, of each a drachm,  
Camphor two scruples,  
Oil of aniseeds half a drachm,  
Rectified spirit two pounds,  
Salt of tartar, one ounce,  
Honey and liquorice root, of each four ounces,  
Digest for some weeks and filter.

I should also mention that the Tinctura Opii Ammoniata now in the British Pharmacopœia is very similar to the preparation with the same name in the

old Edinburgh pharmaeopœias and which, in Scotland, was also known as Paregoric Elixir.

Another name of far more celebrity is Laudanum the origin of which has been the subject of discussion; some believing it to be merely a corruption of another name 'ladanum', others supporting the theory of its derivation from the latin 'laus'. The latter appears to my mind to have the best evidence in its favour, supported as it is by such authorities as Lemery, Zwelfer, Bruno, Crollius, and others.

Respecting the preparations which, during the seventeenth century, became generally known as laudanums, they differed greatly in their properties; the laudanum mereuriale and laudanum minerale being mercurial compounds; the laudanum vitrioli a ferruginous mass; and the laudanum opiatum usually a preparation of opium. These were commonly prescribed in the form of pills; liquid laudanums not coming into vogue until about the early part of the next century, and as the use of the mereurial, vitriol and other kinds died out, the name laudanum came to be generally accepted in this country as meaning a preparation of opium, which some chemists consider is best represented by a tincture; others by a wine.

Another name frequently associated with laudanum is Opiate which strictly signifies a narcotic medicine containing opium. In the first half of the seventeenth century, however, a practice of applying it to compounds of a totally different nature seems to have become very common; both Castellus and Schroder refer to it, and in several medical works we find reference made to purging opiates, as confection of scammony, and strengthening opiates, so called merely because they possessed the general appearance and consistency of the older confections, electuaries and antidotes, that did contain opium. Tooth powders when mixed into a paste with honey or syrup were likewise occasionally alluded to as opiates. This practice appears to have survived to the present day in at least one European country, as the Pharmacopœia Gallica has shown.

Before noticing Sweet Spirit of Nitre it may not be amiss to give some particulars relating to the original Spirit of Nitre itself which was obtained after this manner :—

Pure Nitre one pound,  
Potters Earth five pounds,

Mix them, with which fill up the neck of a glass retort, well luted up to its neck, place it in a close Reverberatory Furnace with a capacious Receiver; give fire by degrees to the highest, for the space of twenty four hours, the Flegm comes first with white vapours; then the Spirit in red vapours which will make the Receiver as a rubine.

Description. It is in colour and form like to Spirit of Salt, vaporous and stinking almost like Aqua Fortis; it rots away a cork stopple and makes it look yellow.

That which is right and good dropt on a brass farthing will boil and make it stir and give it a blew color.

The product obtained by this method, which, although taken from a translation of the London Pharmacopœia published towards the close of the seventeenth century, looks very like that adopted by Raymund Lully in the thirteenth, was an impure nitric acid and when taken internally frequently mixed with spirit of wine this simple mixture being known as Sweet Spirit of Nitre. N. Lemery directs eight ounces of spirit of nitre to be mixed with eight ounces of rectified spirit of wine and the mixture set

aside for a few hours until the reaction ceases by which time the product will be reduced to about half the quantities originally mixed ; the dose of this was from four to eight drops. Charas employed the same quantities but subjected the mixture to three distillations, and prescribed about half a drachm for a maximum dose. Both his and Lemery's works were translated into English and considered as authorities. In this country thirty years later Dr. Freind published with his Chymical lectures several tables of specific gravities and among the liquids mentioned therein is Sweet Spirit of Nitre, concerning which he states that a piece of lead weighing 455 grains in the air, when immersed in this spirit weighed 414, and in common water also 414, but in boiled water the weight was 424 grains. About the same period, was also issued a volume of prescriptions written by the celebrated Dr. Radcliff, founder of the Radcliff library at Oxford, and in the appendix to the second part there is some indication that the so called Sweet Spirit of Nitre was regarded as an acid remedy and prescribed as such. In the fifth edition of Dr. Quincy's Dispensatory a process is described for which the proportion of spirit of nitre to be employed is four onnees to the

half pound of reetified spirit of wine, and these are distilled over a sand furnaee; the dose being from 20 to 120 minims.

From the frequent notiees of it by different writers during the earlier years of the eighteenth eentury, it may safely be inferred that the reputation of Sweet Spirit of Nitre, in this country, was fully established long before the name appeared in the pharmacopœia.

The particular edition in which the name and process occur for the first and only time is that of 1745 where the formula is given in these terms:—

### Spiritus Nitri Dulcis.

Spiritus vinosi reetificati m. libras duas. ( 32 fl ozs)

Spiritus nitri Glauberi p. libram dimidiam.( 6 ozs )

Misce infundendo nitri spiritum alteri, et distilla leni calore, quamdiu, quod prodit, fermentationem eum sale lixivioso non suseitat.

Although no longer recognised by the medical profession it yet maintains its position, as a domestic remedy, in the estimation of the public; the efforts of some chemists to substiute for it the more seientific but eertainly less palatable Spirit of Nitrous Ether



not having met with much, if any, success.

One of the most important salts used by the chemists in olden time was the sal tartari or salt of tartar. obtained by calcining the tartar deposited from wine in a potters furnace. This was also called Sal Absinthii, Kali Præparatum, and more recently Carbonate of Potash. To make cream of tartar Dr. Salmon directs thus:— “ Take impalpable powder of tartar well washed in warm water, to which put boiling water and stir it with a wooden spatula till part of the tartar be dissolved, filter it through an Hypocras bag while it is hot lest it coagulate; to the tartar remaining add more boiling water, and repeat the former work so often till all the tartar be dissolved and nothing remains but the sand; put all these waters together and let them cool, so shall you have the Cream at the top, and the crystals to stick at the side and bottom. Both Cream and crystals are of one nature”. In doses of thirty grains to two drachms and in combination with one or two grains of scammony or gamboge it was prescribed as an aperient.

With cream of tartar there is probably not another medicine in domestic pharmacy so frequently combined as Milk of Sulphur, or as it was also called

Magistery of Sulphur. Several methods of preparation were in practice formerly and among the earliest that described by Crollius, who boiled one part of Flowers of sulphur with three parts of Salt of tartar then filtered the solution and precipitated the milk with wine, in preference to vinegar. Lemery employed the same materials but precipitated with vinegar "*ou quelqu'autre acide*". The best known method, however, is the one officially sanctioned in the London Pharmacopœia of 1720 where the sulphur is ordered to be boiled with quicklime and the milk precipitated with spirit of vitriol (diluted sulphuric acid). The operator was allowed to use salt of tartar instead of quicklime for dissolving the sulphur, but, as that must have been more costly than the latter and did not yield such satisfactory results, it was not likely to have been employed so frequently.

Since 1720 Milk of Sulphur has not been officially recognised in this country, but attempts have been made to substitute for it the Sulphur Precipitatum of the British Pharmacopœia, a preparation of very different composition and consequently not a fair substitute.

Respecting the more ancient Flowers of Sulphur a

rather curious passage occurs in the "Booke of Distillation", which as it is brief may be given in the quaint diction of the translator:— An oile out of brimstone... alone, Brasanolus affirmeth, distilled & gathered... marvelously by force of fire and ice. But the... best should be, if any would purchase the sweat... ing of the brimstone, which in brimstony places... out of hils as a flowre sendeth it forth: yet it... may & ought to be named ye flowre of the brim... stone: for as ye dew, even so doth the sweat issue... forth of the stones. When I (Brasanolus) accompanied our most noble Duke to Naples, unto... ye mighty Charles Emperour, in the yeare 1535,... and being there, labored to see those hot bathes... named Baia, & other deepe pyts of boiling water... where among the mountaines lieth or is a goodly... valley, in the middle of which doth a water... boyle most hote, and in another angle of it, is... there a pitte boyling, the ground or soyle of this... valley appeareth blew, & compassed with mount... ains round about: certaine children were there,... which I saw wype the hilles with their fingers,... who after thrusting the fingers into the mouth,... licked them sweetly: which (when I saw) I de...

...manded what the children then did, & answe...  
...was made mee, that they did eate brimstone & ...  
...that it was most sweete: then began I to tast...  
...that flowre, which did sweate out of the stones...  
...like dew: and I found this to be most sweet, in-...  
...somuch that the same morning I would eate none...  
...other thing at my dinner, saving bred, & that...  
...most sweet flowre of brimstone: and this is the...  
...very same, out of which the most perfitte oile...  
...should be made, etc.

This oil of brimstone is frequently met with in old prescriptions under the name of *Oleum Sulphuris per Campanum*, which in the pharmacopœia of 1745 was changed to *Spiritus Sulphuris per Campanam*. The mode of preparation, nevertheless, remained the same as that commonly practised in the sixteenth century and was very simple in details. A large iron vessel containing burning sulphur was placed beneath a capacious funnel shaped glass receiver with a tube in its side from which the oil as it dropped was collected.

The product, according to one authority, averaged one ounce from every pound (12 oz) of Flowers of Sulphur burnt, the yield being influenced by the state of the air which if damp increased that proportion.



De Distillation of ye oile of Brimstone.

At the present time we have only two preparations generally known and sold by chemists under the name of Precipitate ; formerly, there were as many as five.

The first was obtained by dissolving mercury in aqua fortis, evaporating the solution and heating the residue to redness ; this formed what was known as Corrosive, Arcanum Coralinum, or Red Precipitate.

For the next two a similar solution of quicksilver was divided into two parts, saturated solution of sea salt being added to one, and oleum tartari per deliquium ( deliquesced salt of tartar ) to the other ; from the former was thrown down White Precipitate, and from the latter Yellow precipitate. The process for the third variety, called Green Precipitate, was as follows :— Mercurius duleis eight ounces. Levigate ...it upon a Porphyry, to the highest subtilty ; then...  
...put it into a glass vial, and add thereto of the...  
...strongest Soap boilers Lees six ounces. shake all...  
...very well together till the mercury is dissolved...  
...into a very black kind of substance, which digest...  
...over a gentle sand heat for 24 hours, shaking the...  
...glass now and then. Then add to it fair water,...  
...shake again and decant, repeat this work four...  
...or five times until the powder becomes greenish...

This was the true Green Precipitate and a very different preparation to the common sort, made with copper in addition to the mercurry, although, like the others it was as often prescribed internally as externally. With regard to the fifth kind, named the Golden or Solar Precipitate, the mode of preparation differed greatly from the above, being much less simple in its details :— Leaf Gold or filings of fine Gold... half an ounce; dissolve it in A R. Take Glass... of Antimony half an ounce, dissolve it in A F.... Quicksilver cleansed three ounces, dissolve it also... in A F. mix all the solutions, and draw a water... by an Alembic: then add fresh A R. draw off... the same often, till the precipitate fumes not... when laid on a red hot iron: calcine all that the... A R. may be spent; then distil from it S V. six... times, and calcine the water gently.

It purifies the whole mass of blood, and the... whole body; no pox can stand before it: it cures... Jaundice, Scurvy, Dropsie, Gout; it provokes... urine, drives up all moist humours, and opens all... obstructions. It cures the Epilepsie, Collick,... Quartan, and all Cancerous and Malign Ulcers. ... Dose from four to six grains.

This process, described in most Dispensatories published about the close of the seventeenth century, was afterwards simplified by the antimony being omitted; the dull red powder thus obtained consisting chiefly of red oxide of mercury.

While referring to mercurial compounds it will not be out of order to notice the curious changes in the character of the more ancient Unguentum Citrinum.

As originally designed by Nicolas Præpositus in the twelfth century, and adopted in the Augustan Dispensatory with the synonym of Basilicon, it contained cerussa, or carbonate of lead, for which in the earlier London pharmacopœias was substituted sugar of lead. After being left out of this latter the name next appeared in the Edinburgh Pharmacopœia, but, there it designated an ointment of only two ingredients instead of the nineteen originally prescribed, and those two were nitrate of mercury and lard.

From the more active and important remedies bequeathed to us by the experience of ages and the industry of alchemists, we turn to those remarkable items the use of which dated back to almost the earliest years of history, and continued until Paracelsus demolished the prestige of the ancient writers.





No Red Precipitate in those days !

The use of herbs being so general, the ancients must have been pretty well acquainted with the lethal properties of many of them, and that this knowledge was at times put to evil purposes history has shown.

It is, therefore, scarcely surprising to find that their materia medica included a very large proportion of substances which superstition invested with powerful antidotal properties. The majority of them would, probably, be regarded as of no value by the prescribers of the present day, accustomed as they are to the using of such agents as morphia, atropine, and digitaline. Yet even so late as in Shakespere's time many of these curiosities were still being employed. Among the most curious in this collection were the lapides Bufonites or Toadstones, concerning which there survived a very ancient popular belief that they originated in the heads of old toads, and placing the creature on a piece of red cloth caused it to vomit up the stone. Lemery's description is thus put into English :— There are two kinds of Bufonites, Chelonites, or Batrachites : one round ; the... other long. The first is round in its circumference... hollow on one side, and convex on the other... in the form of a little cap or bonnet, about...



Extraction of the toadstone.

...half an inch broad at the basis, very smooth,...  
 ...sometimes grey, brown, black, green, and of var-...  
 ...ious colours. The second sort is sometimes more...  
 ...than an inch long, and above four or five lines...  
 ...thick, [ according to Pomet ]. The size of these...  
 ...stones is sufficient to undeceive those who believe...  
 ...that they are taken from the heads of toads, for...  
 ...they are found in the mountains, and the plains...  
 ...where they are produce'd, Some pretend that...  
 ...being powder'd and taken inwardly, they are...  
 ...capable of resisting the Plague and other malig-...  
 ...nant diseases ; that being apply'd to the stinging...  
 ...or bitings of venomous beasts, they draw out the...  
 ...poison. Some hang them about their neck for...  
 ...Quartan Fevers ; but all these virtues are imag...  
 ...inary, for the toadstone has nothing in it but an...  
 ...alkaline quality proper to absorb acids, and to...  
 ...stop looseness, taken from a scruple to half a...  
 ...drachm ; but it is not in use.

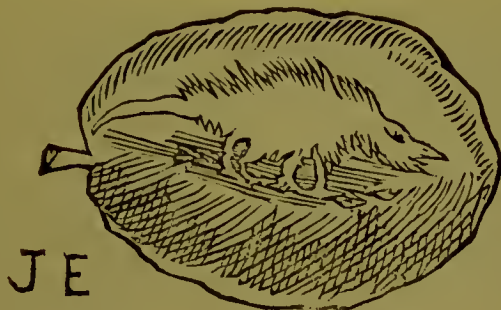
With Bufonites may be mentioned another remedy of the like nature, the Draconites, popularly supposed to be obtained from the heads of dragons. The means adopted for procuring them appear to have been of a very sanguinary character, from which I



Ye slaying of ye terrible dragon.

conclude that dragons were insensible to the magic influence of red cloth, and could not be induced to part with their stones in a more peaceable manner.

Such a medicine must have cost the patient dear for none but the most enterprising, conscientious and withal muscular wholesale druggist, would sally forth upon so hazardous an enterprise as that of getting draconites. The use of these stones, however, did not survive to so late a period as that of the dragons blood, for which there is yet a small demand among certain non-professional prescribers. As regards the origin of this latter name, the author of the *Ortus Sanitatis* explains it in these terms:— *Sanguis draconis quo physici utuntur in medicinis aiunt gummi cujusdam Arboris sic dictum propter sanguinis similitudinem ueri draconis.* Others went so far as to assert that it originated in a remarkable feature of the fruit of the Dragon tree, which, when deprived of its outer skin, disclosed the perfect figure of a dragon with a long tail, a bristly back and all the other external peculiarities usually ascribed to these fabulous monsters by artists. In the animal depicted on the preceding page certain features suggest the idea that the artist found his original model in the farn



Fruit of the Arbor draco ! ( 16th century )

yard, engaged in rearing pigs : not devouring them.

Dragons blood, which, in the time of Dioscorides was one of several substances known under the name of Cinnabar, formerly occupied an important place in the class of astringent remedies, being frequently used, both externally and internally, in cases where catechu or kino would now be employed.

Other dragons of a more deadly character issued from the laboratories of the alchemists ; such were the Poisonous Dragon ( Hyd Perehlor ), the Fortified Dragon ( Potassæ Nitras recrystallised from spirit of nitre ), and the Tamed Dragon ( Hyd Subehlor ).



The item next worthy of mention is one of very common occurrence in old prescriptions, where it is usually written *Terra Sigillata*, although several varieties existed in commerce. They were very ancient inventions originally imported from the Levant, but afterwards from Germany, France, and other parts of the continent. The principal kind came from Lemnos in small cakes of a pale red colour, each weighing about four drachms, and stamped with certain characters of no special signification. This was the *Terra sigillata vera* as described in the fifth book of Dioscorides, who states that in his time it was made up with the blood, and stamped with the figure, of a goat. The Maltese *Terra sigillata alba* was reputed an antidote against the poison of vipers and scorpions; a virtue said to have been given to it by Saint Paul when shipwrecked upon the Island, but this kind was seldom used in medicine. The chief German varieties were *Terra Strigoniensis* or *Medulla Solis*, and *Terra Lignitzensis* or *Medulla Lunæ*. The only existing representatives of this most ancient drug that I am acquainted with are those cakes of pipe clay, commonly sold by oilmen and ehandlers, which were formerly known as *Terra Samia Vulgaris*.





Stamping the Terra sigillata.

Another name no longer met with in pharmacy is that of the *hermodactyls* so frequently prescribed by physicians of old in gouty affections, and recognised in most of the early pharmacopœias that I have seen.

A considerable degree of uncertainty prevailed in former times respecting their true source: *Matthiolum* believing it was the *tuberos orris*; other authorities considering it to be *colchicum autumnale*, but, according to *Moquin Tandon* the *colchicum variegatum*, whose principal habitat was the Island of *Chios*, is now regarded as the veritable source of this ancient purgative.

*Hermodyctylus* has not appeared in a London Dispensatory since 1720, a date when another yet more ancient name also made its last official appearance.

This was *Atropa Mandragora*, a remedy first mentioned in the fourteenth verse of the thirtieth chapter of *Genesis*: most authorities being agreed upon this, although *Lemery* said the *Mandrake* of the ancients was quite a different plant. Nevertheless, this root for many ages had a reputation among the public of being a cure for barrenness, and was also prescribed externally by orthodox practitioners in *Erysipelas*, *Scrofulous* and other diseases. Preparations containing

mandrake appear in many of the old dispensatories, one among them being Unguentum Populeonis concerning which Pomet remarks upon the difficulty experienced in getting the leaves ; the plant having become so scarce. While referring to this I may take the opportunity to state that it appears to have been the practice to apply all ointments in a melted state.



*Atropa Mandragora, Mas.*

*Atropa Mandragora, Foemina.*



J.E

With regard to these two woodcuts, they were copied from the originals published in the sixteenth century which expressed the popular fancy that mandrake roots bore great resemblance to the human form.

Of all the old fashioned remedies that have ceased to be kept in druggists shops, the common viper was one of the most valued and few among them had a longer history. Its use as a medicine originated in very remote times and continued, on the continent, down to the present century ; although, in this country it was not recognised in a London Pharmacopœia after 1745, when the only jusculum mentioned was that of viper. This and the troches were among the most frequently used preparations ; the latter often occurring in prescriptions. Viper troches were also an ingredient in the formula for the famous treacle of Andromicus which appeared in all our earlier Dispensatories to the end of the sixteenth century. In one of the later editions they are directed to be made with eight parts of prepared viper and two of grated bread : the operator's hands being anointed with oil of nutmegs or opobalsamum. When prescribed alone the usual dose was from a scruple to a drachm.

It has just occurred to me that as I have noticed the Golden Precipitate it would be well to present a few facts relating to Golden Ointment : a name still circulating in the shops although the compound first known as such originated more than a thousand years ago ; being one of the many inventions of the celebrated Mesue. The formula, taken from the Augustan Pharmacopœia of 1622, was as follows :—

Ceræ Citrinæ uncias sex.

Olei boni libras duas semis.

Terebinthinæ uncias duas.

Resinæ,

Colophoniac. ana. unciam unam semis.

Thuris,

Mastiches. ana. unciam unam.

Croci drachmam unam.

Confice secundum artem.

( Modus confectionis hic est, ut Oleum & Cera omnium primò liquentur, deindè addatur Terebinthina, tandem pulveres, ac postremò Crocus. )

Anreum à colore & pretio dicitur. Quibusdam Regis Unguentum. vulnera tutò & salubriter glutinat, præsertim in corporibus mollioribus.

Concerning this ointment, it is worthy of note that Dr. Quincy, in 1721, said he could not learn that it was in any great esteem in the practice of the surgeons of his time ; moreover, the formula did not appear in any London pharmacopœia after 1721, neither was it published in the principal officinal dispensaries of and after these dates -- Dr. James's, 1752, Dr. Lewis's improved edition of Quincy's, 1753. Dr. Brookes', 1753. These facts seem to indicate that this old Arabian unguent had dropped out of general use just about the period when the reputation of the Golden Precipitate was being established. More especially as Dr. James gave a very particular and commendatory account, occupying nearly three pages in the above mentioned edition of his dispensatory, of what was, practically, this Golden Precipitate, although he did not call it so, but named it *Mercurius Animatus Solaris*, or animated solar mercury ; the impropriety of applying the name Precipitate to preparations obtained by such processes having been pointed out many years previously. Respecting the medicinal value of the gold in this compound, he remarks, in another chapter, that some chymists considered gold a powerful remedy whilst many authors

were of quite a different opinion " because the effects of gold are found not to answer these great pretensions ; and it may be reasonably questioned whether gold be at all useful in Physic. The virtues of the chymical preparations of gold are equally dubious ; because they seem to derive their energy, not from the gold, but from the menstrua, and other substances mixed with it". The fact of the prevalence of such an opinion among any section of the leading authorities, clearly explains how it could come to pass that this so called Golden Precipitate, by some operators omitting the gold and others the antimony, yet all employing mercury, ultimately merged into Hydrarg Oxidum Rubrum ; a change somewhat like that already noticed in connection with unguentum citrinum.

My own experience confirms this view ; for, when I first went behind the retail counter five and twenty years ago, my instructions were to supply an ointment containing this oxide whenever Golden Ointment was asked for.

Opodeldoo is another instance of a name that has changed its original signification ; as used by Paracelsus, it signified a plaster for wounds and other diseases, and a formula under this title appeared in



the London pharmacopœia for the last time in 1721.

























But the fluid preparation which during the last 150 years has become known in every household as opodeldoe is no more like Paracelsus's remedy, than the Linimentum Saponis of the British pharmacopœia is like opodeldoe.

Having referred to chemical compounds it will be worth while to see what the old alehymical signs or symbols were like. It seems very probable that the majority of them were the inventions of the alehymists during the sixteenth and seventeenth centuries, although some are said to have been in use among the Persians, in their religious rites, more than a thousand years ago ; these were the symbols for gold, silver, copper, mercury, iron, tin and lead, which they called after the names of the planets. The early official pharmacopœias that I have seen, with one exception, omit all notice of them, and even in the officinal dispensatories the number usually shown rarely exceeds forty, although very many more were in actual use. In some instances several different signs were being used at the same time to represent one and the same chymical, but to notice these would take up too much time so I will merely refer to those

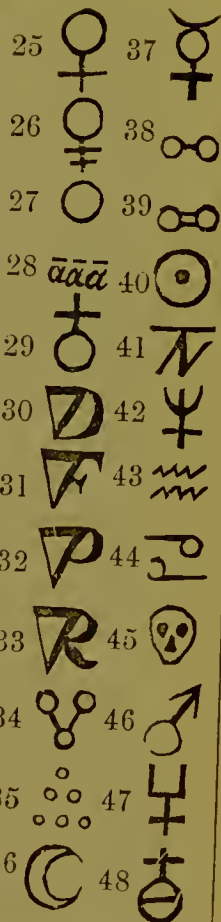
which at the latest period of their application were the more important and most generally employed.

The first four represent the elements 1, Air. 2, Water. 3, Fire. 4, Earth.

The next five stand for the ordinary chemical operations, 5, Distillare. 6, Præparare. 7, Præcipitare, and also the product or precipitate itself. 8, Sublimare, and sublimate. 9, Purificare. 10, Nox. 11, Dies. 12, Dies et Nox. No. 13 is the symbol of Hora, an hour. 14, Mensis, a month. 15, an Alembic. 16, Balneum Arenosum, a sand bath. 17, Balneum Mariæ, a water bath. 18, Balneum Vaporis a vapour bath. 19, Crucibulum, a crucible. 20, Cueurbita, a cucurbit. 21, a Reverberatory Furnace. 22, Retort. 23, Acetum, ( the same as that used to signify a crucible ). 24, Acetum Destillatum. Some authors write this upright like 23.

1		13	
2		14	
3		15	
4		16	
5		17	
6		18	
7		19	
8		20	
9		21	
10		22	
11		23	
12		24	

Formerly, acids were regarded as being bodies full of sharp points, hence it became the custom to introduce into the symbol of any solid or fluid possessing sharp, acid, or corrosive properties a cross, which, in the words of an ancient chymist, meant "stuck full of barbed spikes". No 25 represents *Æs*, Cuprum, or Venus, which, of all the other metals, excepting silver, came nearest gold in its nature, and was considered to be merely a combination of the nobler metal, represented by the circle, with some corrosive quality, shown by the cross, which, if it could be removed, would leave the gold in its original purity. 26, *Æs* Ustum, this was made by exposing alternate layers of copper and rough brimstone sprinkled with a little salt to the fire until the brimstone burnt out, leaving a caustic substance resembling cinnabar. 27, Alumen. 28, this signified Amalgama. 29, Antimonium, or Stibium,



The circle denotes the body to be gold, and the cross being at the top shows that the corrosive quality was supposed to be in excess. 30, Aqua Destillata. 31, Aqua Fortis, also written A. F. 32, Aqua Pluvia. 33, Aqua Regia, also written A. R. 34, Aqua Vitæ, 35, Arena, Sand. 36, Argentum, Luna. This figure would be a perfect circle, if the inner part were properly applied to the outer. All chymists agreed that silver was half gold; or part of it gold, only that part laid hid. Accordingly its character denotes gold half perfected; for, said they, if you can but turn the gold part that lies hid in the silver outwards, your silver will be converted into gold. Thus gold being accounted the most perfect of all metals, silver comes the nearest thereto; consequently it is a sort of semi gold. 37, Argentum Vivum, Mercurius, This symbol evidently shows gold in the middle, silver on the face or top, and a corrosive quality at bottom. The more it was burnt the nearer it came to gold: and were it perfectly calcined and purified, and its colour changed it would be gold. 38, Arsenicum, or Arsenicum album, It has been stated on good authority that white arsenic was not known in the early part of the sixteenth century. 39, Auripigmentum, Orp-

iment. Yellow sulphide of arsenic. This was one of the many mineral substances employed by Hippocrates. 40, Aurum, Sol. The circle is a symbol of perfection and simplicity : no figure being more simple, uniform, or perfect than this ; it comprehends the greatest amount of matter under the least superficies ; and all the radii drawn from its centre to its circumference are equal : properties which correspond very aptly to the sun in the heavens, and to gold on earth.

It contains nothing acrimonious or corrosive.

41, This sign is made up with a T and N, and represents Tincal or Borax. 42, Calx Viva. Quicklime.

43, According to one authority this stands for Camphora ; another uses it for the ancient greek measure Amphora, which I believe is the correct meaning.

44, This had the same signification as the common zodiacal sign Cancer. 45, Caput Mortuum. What-

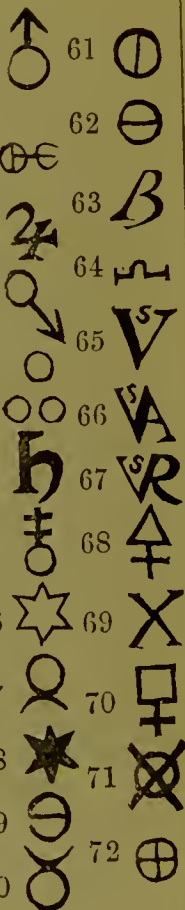
ever solid substance remained, as a product of decomposition, in the retort after a distillation was commonly referred to as the caput mortuum ; thus what was left after the distillation of the oil from vitriol constituted the caput mortuum of vitriol. 46, Mars, Ferrum, Chalybs. This also indicates gold at the bottom, but the upper part denotes that it is too

sharp and volatile, and half corrosive.

The removal of these qualities would at once convert it into gold, to which, after copper, it bore the nearest resemblance ; indeed, Basil Valentine held the opinion that Mars and Venus together make Sol. 47, Cincres Clavellati. The burnt lees of wine, or the ashes of plants. 48, Cinnabar. 49, Crocus Martis, crocus of mars. or, as it is now called ferric oxide. 50, Crocus Veneris, crocus of venus. obtained by calcining alternate layers of copper and sulphur until the metal became spongy and brittle ; this powdered and thrice reverberated for twenty four hours each time, yielded a very red crocus which was used in ointments and plasters. 51, Jupiter, Stannum. This sign is composed with a semicircle and a cross, denoting tin to be one half silver and the other a corrosive.

52, Limatura Martis, steel filings,

53, Oleum, oil. 54, Plumbum, Saturn.



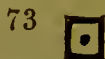
Originally, this seems to have been the same symbol as that used for Stannum, but inverted, subsequently it became simplified until it was almost like the letter *h*. Lead was regarded as a very corrosive metal destructive of all others, excepting gold and silver; whence the sign was frequently written with a double cross or two cross bars above the semicircle, this latter indicating that although corrosive, it yet bore some resemblance to luna. 55, Pulvis. powder of any kind. 56, Regulus Stellatus. Regulus antimonii Martialis. obtained by melting together three pounds of common antimony, one pound of iron, and half a pound of potash. If this operation be well performed the regulus will have on its upper surface the appearance of a star, whence its name regulus stellatus.

57, Sal Alkali. an impure carbonate of sodium. 58, Sal Ammoniacum. 59, Sal, salt. Sal commune. 60, Sal gemmæ, Sal fossilis, Roek salt. 61, Sal nitri, vel Sal petræ. 62, Sal volatile. 63, Semis. half. 64, Spiritus. 65, Spiritus vini. 66, Spiritus vini alcoholisatus. 67, Spiritus vini rectificatus. 68, Sulphur. 69, Talc. 70, Tartarus, tartar. 71, Tutia, tutty. 72 Viridæ Æris, verdigrise. 73, Urine. 74, Volatile. 75, Vitriolum, 76, Vitrum. glass.

77, Mercurius Præcipitatus. This is made up with the symbols for mercury No. 37, sal gemmæ No. 60, and præcipitare No. 7, used in both significations. 78, Mercurius Sublimatus. also composed of 37 and 60, but with No. 8 in both senses.

These are all the more important items of the primitive system of chemical notation ; such as was in use down to as late a period as the first half of the eighteenth century, but although no longer employed for scientific purposes, some of them are yet doing duty as very appropriate trade marks for modern chemists.

Having noticed drugs and chemicals I would like to be able to add some particulars relating to that class of goods known as sundries, but, the information at my disposal not being readily available, that idea is rendered impracticable, however, before laying down the pen I may mention that the leaden shields for cracked nipples, now sold in the shops, were described and recommended three centuries ago by the famous French surgeon Ambrose Pare, who, evidently





understood why lead was to be preferred rather than any other material.

Mineral waters also seem to have been well patronised in this country two and a half centuries ago ; Tunbridge wells and Shirburn well in Yorkshire attracting many thousands of all classes of people, there was also a medicinal spring at Hoxton near London and another not much further from the eastern gate of the city, concerning which a medical writer of the period expressed his opinion in this fashion :—

Another precious water, men found out,  
Two miles from Stratford-bow, ( or thereabout. )  
I came to London hoping to doe cures,  
But this well from me, all my worko allures :  
'Twas said, the vertue of the well was this,  
To helpe all maladies, nought came amisse.  
The Citizen in throngs, drinckes, washes, swills,  
The well was watch'd with staves and rustie bills,  
That I, and some Practicioners were scar'd,  
When of this moyst Phisician first we heard,  
And Surgeons and good Oculists there were,  
That of this well, were in a little feare.  
And if it had held long, those soueraigne drops

Had made the Apothecaries shut up shops.  
The women that in Cheape-side hearbs doe sell,  
Were pittifully hindred by this well :  
Wormewood, that's good for many a strange disease,  
Was good for nothing then, but murther fleaes,  
The Merehants that strange drugs did hither bring,  
As Secney, Sarsaperilla, and many a thing,  
Were doubtfull that their trades would quickly fall,  
If this Well should doe any good at all ;  
And all the Druggists, that by wholesale sold,  
Were like to seeke new trades, and leave their old :  
For all the Hearbes, Rootes, Plants and Stones, and trees,  
Gums, fruits and mineralls, beasts, fowles, wormes, bees,  
And all the helps for man, which God created,  
This well then ( in a manner ) halfe defeated.  
But is't not ignorance to thinke, or follie,  
That choller, sanguine, flegme, and melancholy,  
Hot, cold, moist, dry, of strange, and various natures,  
And how that all diseases, sundry matters,  
And that the poore cold water of a Well,  
Should all mens griefes expell, all Art excell ?  
But in the Text, it is th'Almighties will,  
That we should honour the Phisician still :  
And going to these Wells with care and cost,

Makes purblind, starke blind, and the labour lost :  
For all the fame of them is but a blast,  
Or like a nine dayes wonder's quickly past.

THE END.



Errors in a few of the copies.

- Page 9 ... l. 7 from top for succeeding read  
succeeding.
- „ ... „ 6 from bottom omit s from  
resembling.
- 15, 24, 40, for 1720 read 1721.
- 28 ... „ 11 from bottom for third va-  
riety read fourth variety.
- 29 ... „ 5 from bottom for prvokes  
read provokes.
- 42 ... „ 6 from bottom for sixteenth  
read seventeenth.
- „ ... „ 12 from bottom for jusculum  
read jus.

